

Remarks

In response to the Office Action mailed on February 9, 2009, the Applicants respectfully request reconsideration in view of the following remarks. In the present application, claims 1, 114, 131, and 148 have been amended for clarification and claims 166-167, 170,171, 174-175, 178-179 have been canceled without prejudice or disclaimer. Support for the amended claims may be found in at least in Figure 2, page 13, lines 7-16, page 16, line 24 through page 17, line 7, and page 33, line 15 through page 34, line 6 in the Specification. No new matter has been added.

In the Office Action, claims 114-130 and 169-172 are rejected under 35 U.S.C. § 112, second paragraph as being allegedly indefinite. Claims 166-167, 170-171, 174-175, and 178-179 are rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement. Claims 148-164 and 177-180 are rejected under 35 U.S.C. § 101 as being allegedly directed to non-statutory subject matter. Claims 1-16 and 165-168 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Ellis et al. (US 2005/0028208, hereinafter “E208”) in view of Mura et al. (US 6,996,837, hereinafter “Mura”), Rakib et al. (US 2004/0172658, hereinafter “Rakib”), Brooks et al. (US 7,114,174, hereinafter “Brooks”) and further in view of Kato et al. (US 6,188,700, hereinafter “Kato”). Claims 114-164 and 169-180 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over E208 in view of Brooks and Kato.

Change to Attorney Docket Number

Please note that the Attorney Docket Number for this application is now 60374.0093USU1.

Claim Rejections - 35 U.S.C. §112, Second Paragraph

Claims 114-130 and 169-172 are rejected as being allegedly indefinite. Claims 170-171 have been cancelled without prejudice or disclaimer, rendering the rejection of these claims moot. Regarding the remaining claims, claim 114 has been amended to clarify the limitation "the STT" is the master STT recited in the preamble. Claims 115-130, 169, and 172 depend from amended claim 114 and thus specify at least the same features. Based at least on the foregoing, the rejection under 35 U.S.C. §112, Second Paragraph should be withdrawn.

Claim Rejections - 35 U.S.C. §112, First Paragraph

Claims 166-167, 170,171, 174-175, 178-179 are rejected as allegedly failing to comply with the written description requirement. The aforementioned claims have been canceled without prejudice or disclaimer, rendering the rejection of these claims moot.

Claim Rejections - 35 U.S.C. §101

Claims 148-164 and 177-180 are rejected as being allegedly directed to non-statutory subject matter. Claims 178-179 have been canceled without prejudice or disclaimer rendering the rejection of these claims moot. Regarding the remaining claims, claim 148 has been amended to clarify that the computer readable medium comprises a memory device encoded with computer executable instructions operable in a processor-containing set-top terminal (STT) which, when executed by the STT, will cause the STT to perform the various functions specified therein. Support for this amendment may be found in at least Figure 2, page 13, lines 7-16, and page 33, line 15 through page 34, line 6 in the Specification. It is respectfully submitted that the aforementioned amendment defines structural (e.g., a memory device and a processor) and functional (e.g., the computer executable instructions encoded on the memory device are

executed to perform the functions of tuning, encoding, instructing, and receiving) interrelationships between a data structure and computer software and hardware components (thereby permitting the data structure's functionality to be realized). Based at least on the foregoing, the rejection under 35 U.S.C. §101 should be withdrawn.

Claim Rejections - 35 U.S.C. §103(a)

Claims 1-16 and 165-168

Claims 1-16 and 165-168 are rejected as being as being allegedly unpatentable over the combination of E208, Miura, Rakib, Brooks and Kato. Claims 166-167 have been cancelled without prejudice or disclaimer, rendering the rejection of these claims moot. The rejection of the remaining claims is respectfully traversed.

Amended claim 1 is patentably distinguishable over the cited art for at least the reason that it recites, for example, "a first tuner tuning a television signal from a received multiplexed signal, to a first tuned television signal, wherein the multiplexed signal is received from a headend service provider" and "an encoder supporting a plurality of encoding formats and coupled to the first tuner and receiving the first tuned television signal and digitally encoding the first tuned television signal having one of the encoding formats into an encoded signal having another one of the encoding formats, and further configured to operate in accordance with a parameter describing quality of the encoded signal, and further configured to automatically change the parameter upon the master STT becoming ready to compress the television signal from the multiplexed signal received from the headend service provider, such that the quality of the encoded signal is improved while achieving a low latency, wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality."

The combination of E208, Miura, Rakib, Brooks, and Kato fails to teach, disclose, or suggest at least the aforementioned recitation from amended claim 1. For example, E208 discusses a set-top box which receives program guide data from a television distribution facility (Fig. 2d) but fails to disclose (as conceded in the Office Action – see pages 11-12) an encoder supporting a plurality of encoding formats and coupled to the first tuner and receiving the first tuned television signal and digitally encoding the first tuned television signal having one of the encoding formats into an encoded signal having another one of the encoding formats, and further configured to operate in accordance with a parameter describing quality of the encoded signal, as specified in amended claim 1. As E208 fails to disclose an encoder, the reference also fails to disclose automatically changing the parameter upon the master STT becoming ready to compress the television signal from the multiplexed signal received from the headend service provider, such that the quality of the encoded signal is improved while achieving a low latency, wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality.

Miura fails to overcome the deficiencies of E208. For example, Miura discusses utilizing one terminal to watch a program and simultaneously either record another program or watch other programs on a plurality of television receivers, and to watch television receivers located in respectively different rooms without any inconveniences accompanying the wiring of coaxial cable. (See Col. 1, lines 35-42). Miura further discusses terminal equipment for cable television having a first tuner section and a second tuner section for receiving respective cablecast signals for programs transmitted from a cable television signal. A cablecast signal received by the second tuner section is transmitted to a slave terminal connected to a second television receiver located in a different room from a master terminal. (See Col. 1, line 64 through Col. 2, line 16).

As conceded in the Office Action (see pages 13-14), E208 in view of Miura fails to disclose an encoder supporting a plurality of encoding formats and coupled to the first tuner and receiving the first tuned television signal and digitally encoding the first tuned television signal having one of the encoding formats into an encoded signal having another one of the encoding formats, and further configured to operate in accordance with a parameter describing quality of the encoded signal, as specified in amended claim 1. Thus, Miura fails to overcome the deficiencies of E208 at least respect to the claimed encoder. Furthermore, since Miura fails to disclose an encoder, the reference also fails to disclose automatically changing the parameter upon the master STT becoming ready to compress the television signal from the multiplexed signal received from the headend service provider, such that the quality of the encoded signal is improved while achieving a low latency, wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality.

Rakib fails to overcome the deficiencies of E208 and Miura. For example, Rakib discusses an MPEG encoder 147 (Fig. 4A) which is utilized to uncompressed high bit rate digital data (i.e., broadcast video) over a local area network for viewing over a CATV video channel. (See paragraphs 0124 and 0125). As conceded in the Office Action however (see pages 13-14), E208 in view of Miura and Rakib fails to disclose an encoder supporting a plurality of encoding formats and operable in accordance with a parameter describing the quality of the encoded signal, and further configured to automatically change the parameter such that the quality of the encoded signal is improved where the parameter change is responsive to a change in capability of the encoder to encode at the improved quality. Thus, Rakib fails to overcome the deficiencies of E208 and Miura at least respect to the aforementioned features. Furthermore, since Rakib fails to disclose automatically changing a parameter, the reference also fails to disclose

automatically changing the parameter upon the master STT becoming ready to compress the television signal from the multiplexed signal received from the headend service provider, such that the quality of the encoded signal is improved while achieving a low latency.

Brooks fails to overcome the deficiencies of E208, Miura, and Rakib. For example, Brooks discusses that data associated with output video data is derived from a requesting device. The requesting device contacts a gateway system to request that the gateway system send a video stream and to inform the gateway system as to bandwidth requirements and the output video format which should be used to encode the data. (See Col. 10, lines 1-15). Brooks however, fails to disclose an encoder which is further configured to automatically change the parameter upon the master STT becoming ready to compress the television signal from the multiplexed signal received from the headend service provider, such that the quality of the encoded signal is improved while achieving a low latency, as specified in amended claim 1. Contrary to Brooks which requires a requesting device to inform a gateway system as to the output video format for encoding data, amended claim 1 does not require informing a gateway system as to an output video format but rather automatically changes the parameter (describing the quality of the encoded signal) upon the master STT becoming ready to compress the television signal from the multiplexed signal which is received from the headend. Furthermore, as conceded in the Office Action (see page 16), Brooks is also silent about a parameter change being responsive to a change in capability of the encoder to encode at the improved quality.

Kato fails to overcome the deficiencies of E208, Miura, Rakib, and Brooks. For example, Kato discusses an encoded signal transmission method to encode and transmit a digital signal at a variable bit rate where the size of a transmission buffer for temporarily storing an encoded signal on the side of an encoder signal is controlled in accordance with an encoding bit

rate. The output bit rate from the transmission buffer is altered to a new encoding bit rate value after a predetermined delay time from when the encoding bit rate is altered on the assumption that the size of a code buffer which may be used by the encoder system is constant. The delay time is determined from the receiving buffer size of the decoder system and the minimum value of the encoding bit rate. (See Col. 8, lines 1-21). Kato however, fails to disclose an encoder which is further configured to automatically change the parameter upon the master STT becoming ready to compress the television signal from the multiplexed signal received from the headend service provider, such that the quality of the encoded signal is improved while achieving a low latency, as specified in amended claim 1. In contrast, Kato discusses altering an output bit rate to a new encoding bit rate value after a predetermined delay which is based on a buffer size of a decoder system and the minimum value of the encoding bit rate. Thus, Kato fails to disclose automatically changing the parameter upon the master STT becoming ready to compress the television signal from the multiplexed signal received from the headend service provider, as specified in amended claim 1. Kato is also silent with respect to the quality of the encoded signal is improved while achieving a low latency, as specified in amended claim 1.

The combination of E208, Miura, Rakib, Brooks, and Kato would not have led to the claimed invention because these references fail to at least teach, disclose, or suggest “a first tuner tuning a television signal from a received multiplexed signal, to a first tuned television signal, wherein the multiplexed signal is received from a headend service provider” and “an encoder supporting a plurality of encoding formats and coupled to the first tuner and receiving the first tuned television signal and digitally encoding the first tuned television signal having one of the encoding formats into an encoded signal having another one of the encoding formats, and further configured to operate in accordance with a parameter describing quality of the encoded signal,

and further configured to automatically change the parameter upon the master STT becoming ready to compress the television signal from the multiplexed signal received from the headend service provider, such that the quality of the encoded signal is improved while achieving a low latency, wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality,” as recited by amended claim 1. Accordingly, independent claim 1 patentably distinguishes the claimed invention over the cited references, and Applicants respectfully request withdrawal of the current rejection of this independent claim.

Dependent claims 2-16, 165, and 168 also patentably distinguish the claimed invention over the cited references at least for the reasons described above regarding amended independent claim 1, and by virtue of their dependency upon the aforementioned claim. Accordingly, the Applicants respectfully request withdrawal of the current rejection of these dependent claims.

Claims 114-164 and 169-180

Claims 114-164 and 169-180 are rejected as being allegedly unpatentable over E208, Brooks, and Kato. Claims 170,171, 174-175, 178-179 have been canceled without prejudice or disclaimer, rendering the rejection of these claims moot. The rejection of the remaining claims is respectfully traversed.

Amended independent claims 114, 131, and 148 recite similar features as amended claim 1. As discussed above, neither E208 nor Brooks nor Kato teaches, discloses, or suggests “a first tuner tuning a television signal from a received multiplexed signal, to a first tuned television signal, wherein the multiplexed signal is received from a headend service provider” and “an encoder supporting a plurality of encoding formats and coupled to the first tuner and receiving the first tuned television signal and digitally encoding the first tuned television signal having one of the encoding formats into an encoded signal having another one of the encoding formats, and

further configured to operate in accordance with a parameter describing quality of the encoded signal, and further configured to automatically change the parameter upon the master STT becoming ready to compress the television signal from the multiplexed signal received from the headend service provider, such that the quality of the encoded signal is improved while achieving a low latency, wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality.” The combination of E208, Brooks, and Kato would not have led to the claimed invention because these references fail to at least teach, disclose, or suggest the aforementioned features. Accordingly, claims 114, 131, and 148 each patentably distinguishes the claimed invention over the cited references, and the Applicants respectfully request withdrawal of the current rejection of these claims.

Dependent claims 115-164, 169, 172, 173, 176, 177, and 180 also patentably distinguish the claimed invention over the cited references at least for the reasons described above regarding amended independent claims 114, 131, and 148 and by virtue of their dependency upon the aforementioned claims. Accordingly, the Applicants respectfully request withdrawal of the current rejection of these dependent claims.

Conclusion

The preceding arguments are based only on the arguments in the Office Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the Office Action. Thus, the claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding argument in favor of patentability is advanced without prejudice to other bases of patentability. Furthermore, the Office Action contains a number of statements reflecting characterizations of the related art and

the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

In view of the foregoing remarks, Applicants respectfully submit that the claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 13-2725.

Respectfully submitted,

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